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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,419	11/10/2003	Hans Torp	15-DS-000523 DIV2-1 (1248	5172

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EXAMINER	
JAWORSKI, FRANCIS J	

ART UNIT	PAPER NUMBER
3768	

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/705,419	TORP ET AL.	
	Examiner	Art Unit	
	Jaworski Francis J.	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/20/3,2/11/5*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *(pet.2/19/4)* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/20/3,2/11/5*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

Claims 1 - 6 of this application conflict with claims 7 - 12 of Application No. 10/705,087.. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Claim Rejections - 35 USC § 112

Claims 1 – 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to base claim 1, there is no indication whether the ultrasound has any relationship to the estimating/storing and displaying steps. Under one reasonable interpretation these steps involve the manipulation of ultrasound signal data. Under a broader, equally reasonable interpretation, no such limitation is to be inferred, and the steps may in fact evolve in any modality associated with ultrasound in a suite of measurements. (See also the Epstein et al and Sano-based rejection infra.)

No dependent claim remedies this vagueness.

Additionally, " the estimated strain rates " lacks antecedence since the prior-recited " tissue deformation value " may be a value other than a strain rate estimation, i.e. is a broader terminology. (See Criton US5,800,356 col. 1 lines 57 – 63 as an example of non-strain rate tissue deformation parameters, and also the Sano-based rejection infra.) Claims 4 – 5 do remedy this defect by clarifying the scope of the former as limited to a strain value.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 – 4, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Epstein et al (US6031374) and Sano (US5615680). Epstein

et al teaches strain rate analysis across like heart cycles as an MRI modality enactment of stress testing, see col. 2 bottom, and further goes on to improve thereover by effecting absolute referencing for vectored myocardial velocities or gradients per Figs. 9 – 10, with col. 1 bottom acknowledgment of stress echocardiography as an adjunct technique. Sano Figs. 22 – 28 is similarly directed to myocardial velocity gradient referencing in quantitative stress echo ultrasound where simultaneous images are displayed of myocardial velocity gradients at different levels of physical stressing of the patient, see col. 1 lines 48 – 58 in conjunction with the aforementioned figures. Therefore, predatory upon the wording indefiniteness regarding the claimed 'ultrasound' role in the claim above, the composite reading against claim 1 under a broad interpretation would be that it would have been obvious to enhance a conventional motion velocity gradient ultrasound echocardiographic stress test with an additional strain rate calculation in another e.g. MRI modality and with simultaneous display of pre- and post-stress results in a way per se conventional, with either reference serving as a primary teaching augmented by the other.

Sano per se in col. 15 suggests a less stressful level of stressing and curtailed testing in the gravely ill patient hence a net of three stress levels would have been obvious to accommodate a patient spectrum range.

Claims 1 – 3 and 6 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Sano since, predatory upon wording indefiniteness as to whether 'tissue deformation value' or 'estimated strain rate' governs the claim scope, Sano teaches quantitative stress ultrasound testing where a heart wall deformation value i.e.

myocardial motion velocity gradient is estimated and stored for different stress level testing epochs and simultaneous display thereof is to be inferred from the col. 1 statement of conventional comparative display. Alternately stated, the Examiner is arbitrating in favor of the broader term throughout, Sano otherwise operating across even cardiac cycle ECG triggering intervals and embracing a multiplicity of stressing levels per reasoning supra.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

Francis J. Jaworski
Primary Examiner

FJJ:fjj

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